

#### ABSTRACT OF THE DISCLOSURE

A fully implantable nerve stimulation system includes an event-triggered, closed-loop control unit that detects physiological events from nerve signals and delivers stimulation pulses to a nerve to produce a desired physiological response. The 5 stimulation system includes a low-noise, low-power nerve signal amplifier, accelerometers that detect position and a battery powered processor that selectively powers components in the system to detect physiological events and deliver stimulation pulses with a minimum of battery power.

10